



File Code: 3420
Route To:

Date: August 17, 2006

Subject: Summary of Douglas-fir Tussock Moth Activity on the Sandia RD

To: Charles Hagerdon, Acting Ranger, Sandia Ranger District

Dear Chuck,

This letter summarizes my observations and our conversation concerning the Douglas-fir tussock (DFTM) outbreak occurring on the District. As I mentioned Monday, July 24, 2006, the DFTM is at epidemic levels on the east side of the Sandia Mountain Wilderness and along portions of Tejano Canyon (Sandia Crest National Scenic Byway). DFTM defoliation was most recently detected in the Sandia Mountain Wilderness in 2004 on 295 acres of the mixed conifer forest cover type (Douglas-fir/White fir), its preferred hosts. This defoliation occurred on the west side of the wilderness in Pino Canyon and portions of Domingo Baca Canyon to the north and Bear Canyon to the south. In 2005 the infestation expanded to 870 acres (Figure 1).

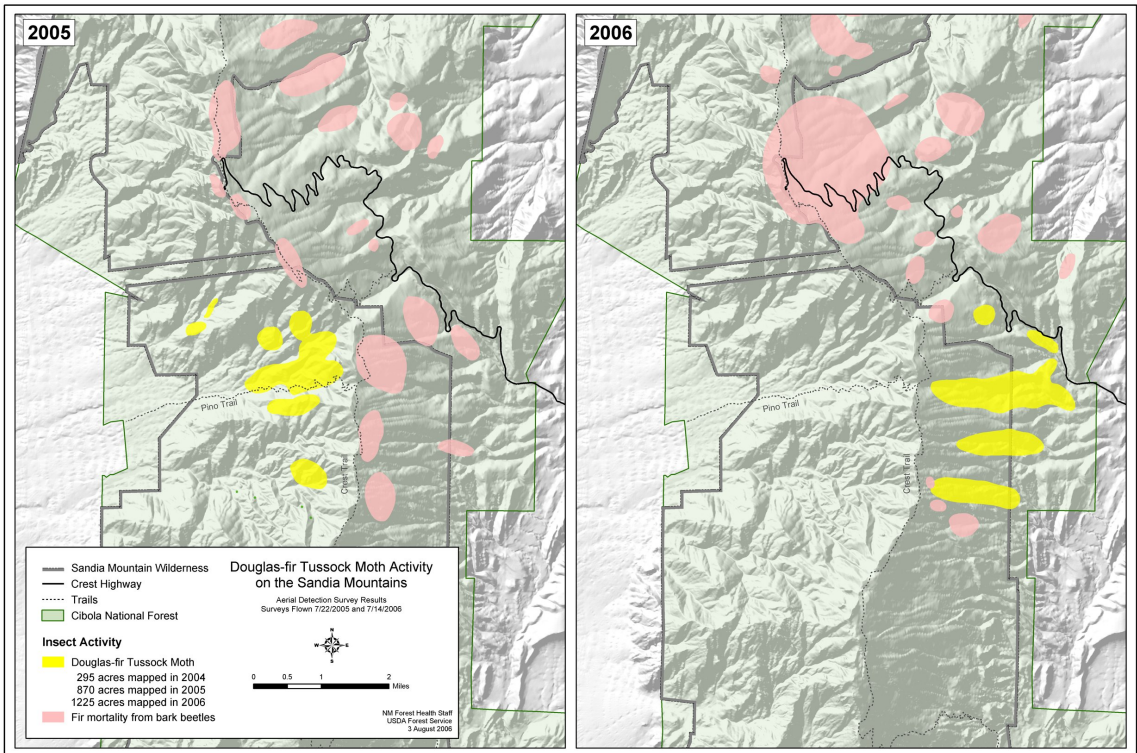


Figure 1 Douglas-fir Tussock Moth Defoliation, Sandia Mountains 2005 and 2006



The 2004-2005 cumulative mortality caused by this defoliator encompassed 940 acres.

Approximately 1,225 acres of tussock moth defoliation were mapped on the east side of the Sandia Mountain Wilderness during our annual aerial detection survey conducted on August 3, 2006 (refer to above map). Suspected areas of DFTM defoliation were also observed on the east side of the Sandias in 2005, south of the Cienega Trail. No new areas of tussock moth defoliation were detected on the west side this year. The infestations on the west side in Pino Canyon, Domingo Baca Canyon and Bear Canyon appear to have collapsed due a combination of factors including parasitism, disease, and possibly lack of host material.

DFTM defoliation and tree mortality were extremely heavy on the east side of the Sandia Mountain Wilderness in 2006 (Figure 2).



Figure 2 DFTM defoliation damages on the eastside of the Sandia Mountain Wilderness

Based on the extent and severity of this outbreak we believe it has been building up for at least 2 years. It has been shown that tussock moth outbreaks do not seem to spread, but build up more or less synchronously in particular areas as it has in the Sandia Mountains.

DFTM defoliation damages along Tejano Canyon (Sandia Crest National Scenic Byway) ranged from light to extremely heavy. All of the defoliation damages occurred in the mixed conifer forest cover type. No defoliation was observed in the higher elevation spruce-fir type. The heaviest defoliation damages occurred at the lower end of Tejano Canyon between Cienega Canyon and Tree Springs Canyon (Figures 3 and 4). The large majority of these heavily defoliated trees are not expected to survive.



Figure 3 and 4 DFTM feeding damages along the Sandia Crest National Scenic Byway between Cienega Canyon and Tree Spring Canyon.

Tussock moth defoliation damages in the upper portions of Tejano Canyon were more variable ranging from light on some trees to moderate and/or moderately heavy on others.



For example, defoliation damages to individual trees at Tree Springs Trailhead (Figure 5) and at Dry Camp, Balsam Glade, and Capulin Springs Picnic Areas ranged from light to moderately heavy. Some trees at Capulin Spring Picnic Area were nearly completely defoliated (Figure 6 & 7). No tussock moth defoliation was detected at the Ninemile Picnic Area site.

Figure 5 Light and moderate DFTM defoliation at Tree Springs Trailhead



Figure 6 & 7 Heavy DFTM defoliation damages, Capulin Spring Picnic Area

These damages were not unexpected since a few DFTM pupal cases were detected in the Capulin Springs Picnic Area in 2003 and large numbers of pupal cases and egg masses were detected at Tree Springs Trailhead; Dry Camp, Balsam Glade Picnic, and Capulin Springs picnic Areas; and the Las Huertas Turnoff in 2005.

In addition average male moth numbers trapped at these sites in 2005 ranged from 33 to 47 per trap. As we pointed out last year, an average trap catch of 17-25 moths is considered predictive of a potential outbreak in the following 1 to 3 years (Refer to our 3420 letter dated August 18, 2005). We are continuing our DFTM trapping efforts and will forward the results later this fall.

In summary, DFTM defoliation damages in the Sandia Mountain Wilderness and along Tejano Canyon (Sandia Crest National Scenic Byway) ranged from light to extremely heavy. Furthermore, we believe that the DFTM will continue to cause heavy defoliation in these areas again in 2007. This could result in significant tree mortality in both the Wilderness and along Tejano Canyon. This defoliator could also threaten the mixed conifer component at Sandia Peak.

Several options for managing the DFTM were presented in our 3420 letter dated August 18, 2005. Some of these options may no longer be applicable because of the damages already incurred and the advanced stage of the outbreak. Because of the protracted timeline for meeting all NEPA requirements, a decision to take action would need to be made soon to accommodate an early June project.

If you have any questions and/or would like to discuss the potential consequences of this outbreak and available options, please call me at (505) 842-3287 or e-mail me at trogers@fs.fed.us.

/s/ Terrence J. Rogers
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